

Keysight U3606B Multimeter|DC Power Supply

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Notices

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Safety Notices

CAUTION

A **CAUTION** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a **CAUTION** notice until the indicated conditions are fully understood and met.

WARNING

A **WARNING** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a **WARNING** notice until the indicated conditions are fully understood and met.

Safety Symbols

The following symbols on the instrument and in the documentation indicate precautions which must be taken to maintain safe operation of the instrument.

	Direct current (DC)		Alternating current (AC)
	Both direct and alternating current		Caution, risk of danger (refer to this manual for specific Warning or Caution information)

Environmental Conditions

This instrument is designed for indoor use and in an area with low condensation. The table below shows the general environmental requirements for this instrument.

Environmental condition	Requirement
Temperature	• Operating condition • 0 °C to 55 °C • Storage condition • –40 °C to 70 °C
Humidity	• Operating condition • Up to 80% RH at 40°C (non-condensing) • Storage condition • Up to 95% RH at 40°C (non-condensing)
Altitude	Up to 2000 m
Pollution degree	2

NOTE

The U3606B Multimeter|DC Power Supply complies with the following safety and EMC requirements:

- IEC 61010-1:2001/EN 61010-1:2001 (2nd Edition)
- Canada: CAN/CSA-C22.2 No. 61010-1-04
- USA: ANSI/UL 61010-1:2004
- IEC 61326-1:2005/EN61326-1:2006
- CISPR11:2003/EN55011:2007, Group 1 Class A
- Canada: ICES/NMB-001:Issue 4, June 2006
- Australia/New Zealand: AS/NZS CISPR 11:2004

Regulatory Markings

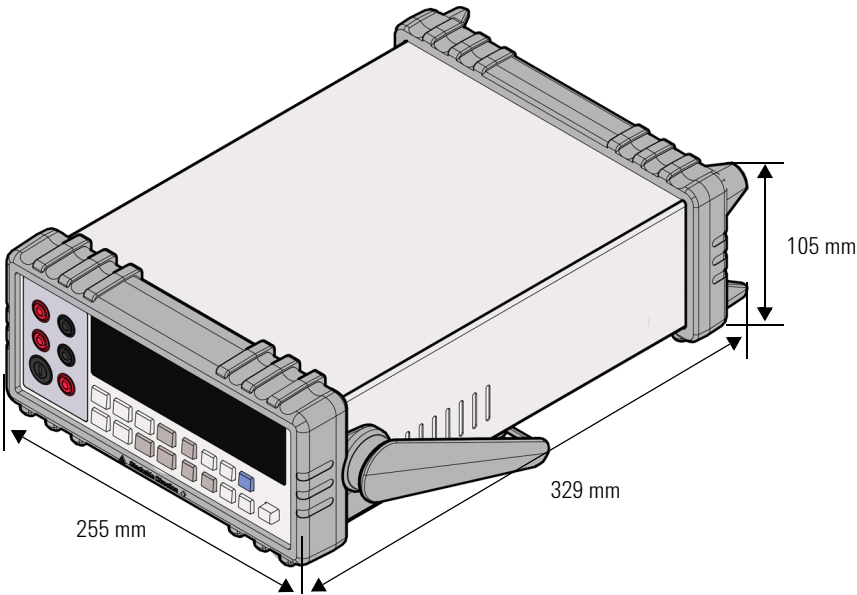
	The CE mark is a registered trademark of the European Community. This CE mark shows that the product complies with all the relevant European Legal Directives.		The C-tick mark is a registered trademark of the Spectrum Management Agency of Australia. This signifies compliance with the Australia EMC Framework regulations under the terms of the Radio Communication Act of 1992.
ICES/NMB-001	ICES/NMB-001 indicates that this ISM device complies with the Canadian ICES-001. Cet appareil ISM est conforme a la norme NMB-001 du Canada.		This instrument complies with the WEEE Directive (2002/96/EC) marking requirement. This affixed product label indicates that you must not discard this electrical or electronic product in domestic household waste.
	The CSA mark is a registered trademark of the Canadian Standards Association.		

Additional Safety Information

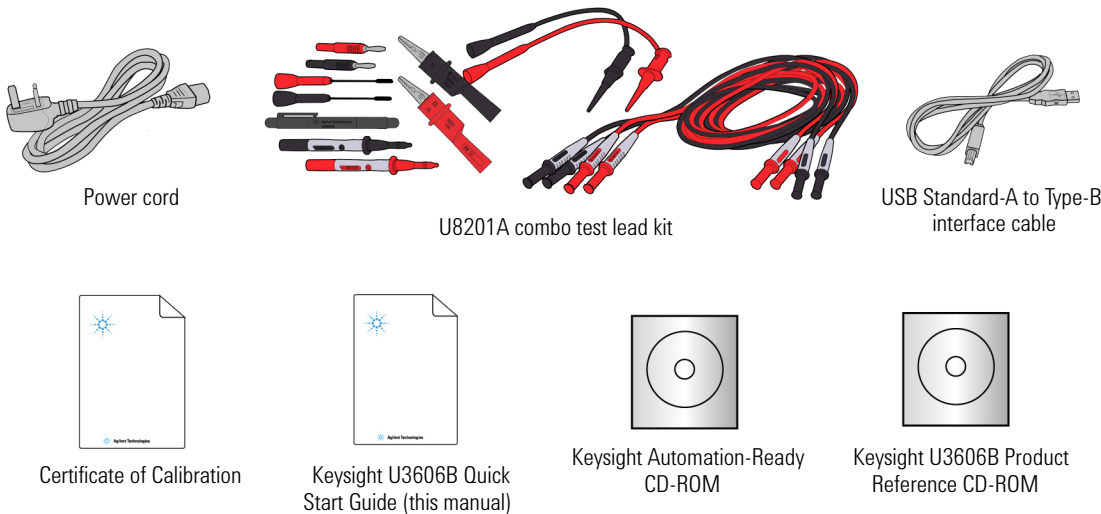
For further information on safety, refer to the *U3606B User's Guide*.

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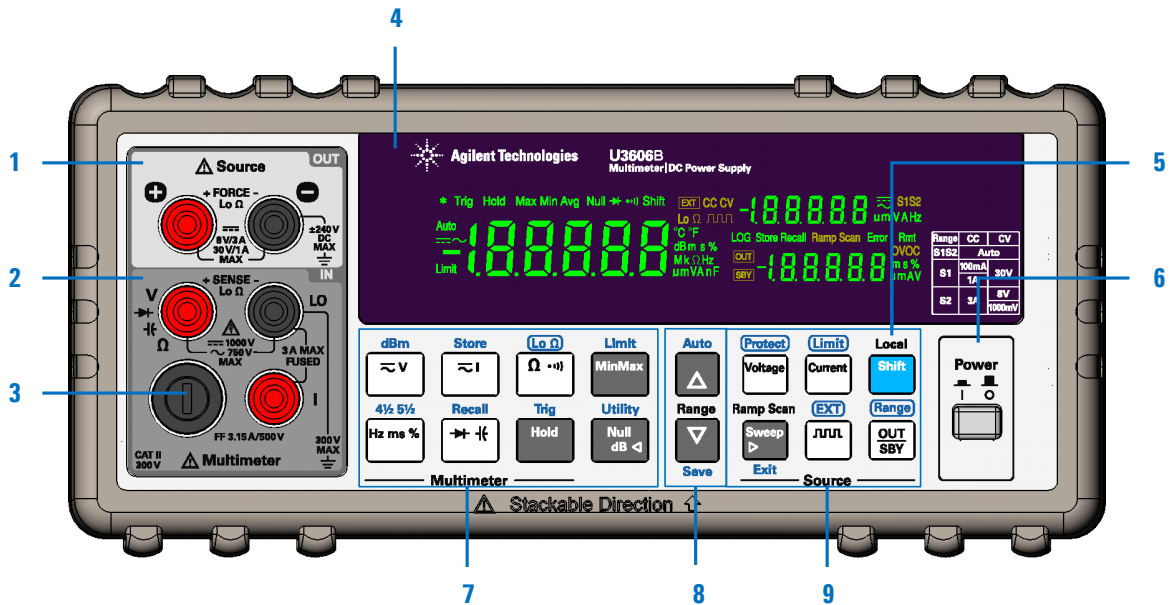
1 Standard Shipped Items



Keysight U3606B Multimeter | DC Power Supply



2 The Front Panel at a Glance

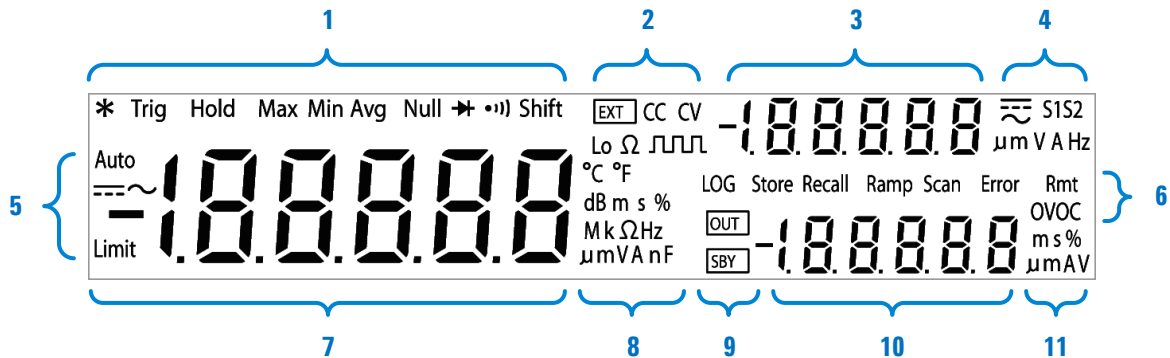


- | | | | |
|---|----------------------------------|---|-------------------------------|
| 1 | Output terminals | 6 | Power ON/OFF switch |
| 2 | Input terminals | 7 | Keys for multimeter operation |
| 3 | Current fuse | 8 | Autorange and manual range |
| 4 | Vacuum fluorescent display (VFD) | 9 | Keys for source operation |
| 5 | Shift/Local | | |

NOTE

For a complete list of all the keypad functions and descriptions, see *Chapter 1, "Getting Started"* in the *U3606B User's Guide*.

3 The Display at a Glance

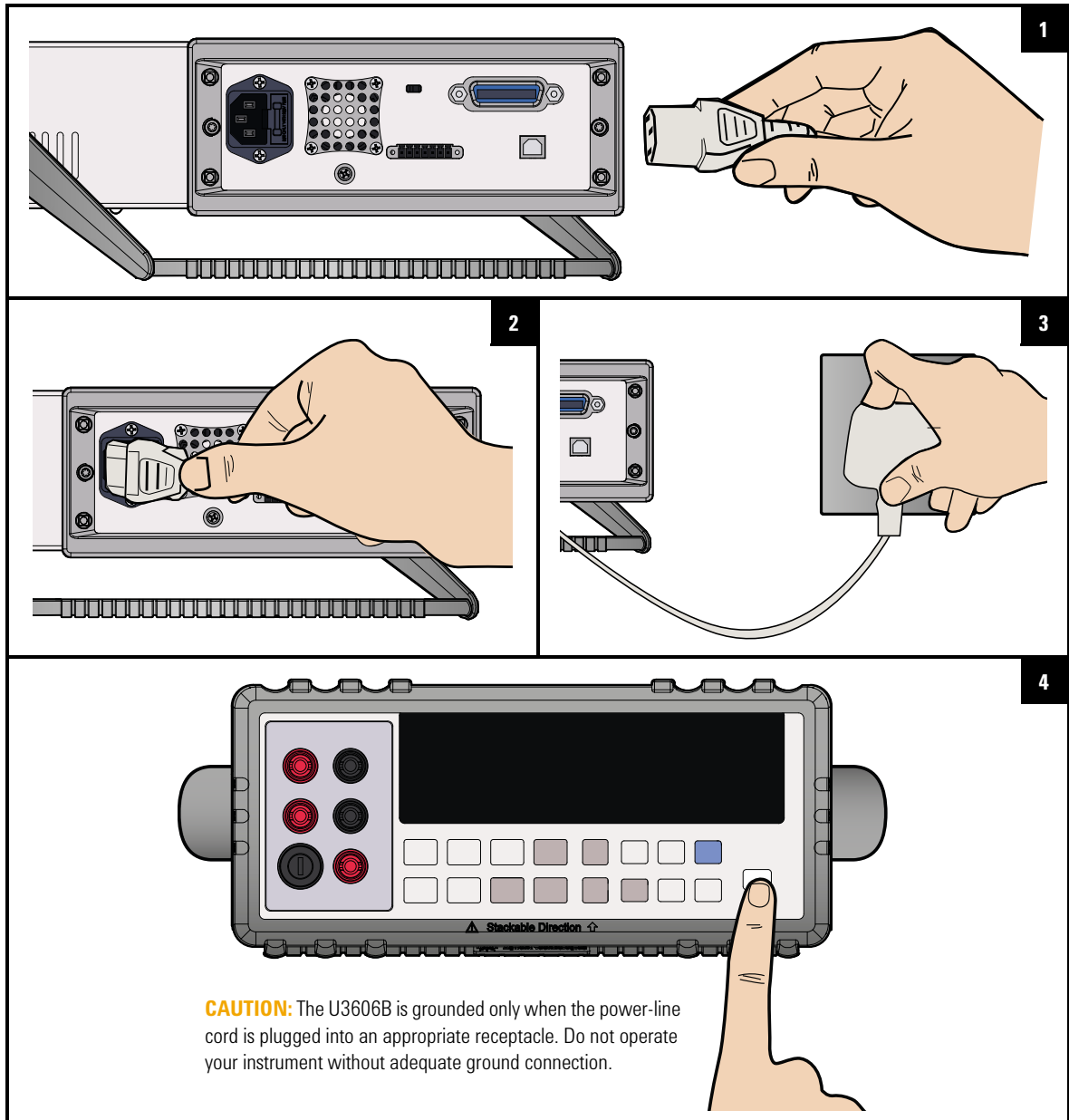


- | | |
|----|--|
| 1 | Trigger, hold, statistics, null, diode, audible continuity, and shift annunciator |
| 2 | Source functions, Lo Ω annunciator |
| 3 | Primary display for source functions (upper secondary display) |
| 4 | Calibration and source functions and units, S1 and S2 range annunciators |
| 5 | Autorangeing, AC, DC, and limit annunciator |
| 6 | Log, store, recall, ramp, scan, error, remote, and over-voltage/over-current annunciator |
| 7 | Primary display for digital multimeter measurements |
| 8 | Measurement functions and units |
| 9 | OUT and SBY annunciators |
| 10 | Secondary display for source functions (lower secondary display) |
| 11 | Source functions and units |

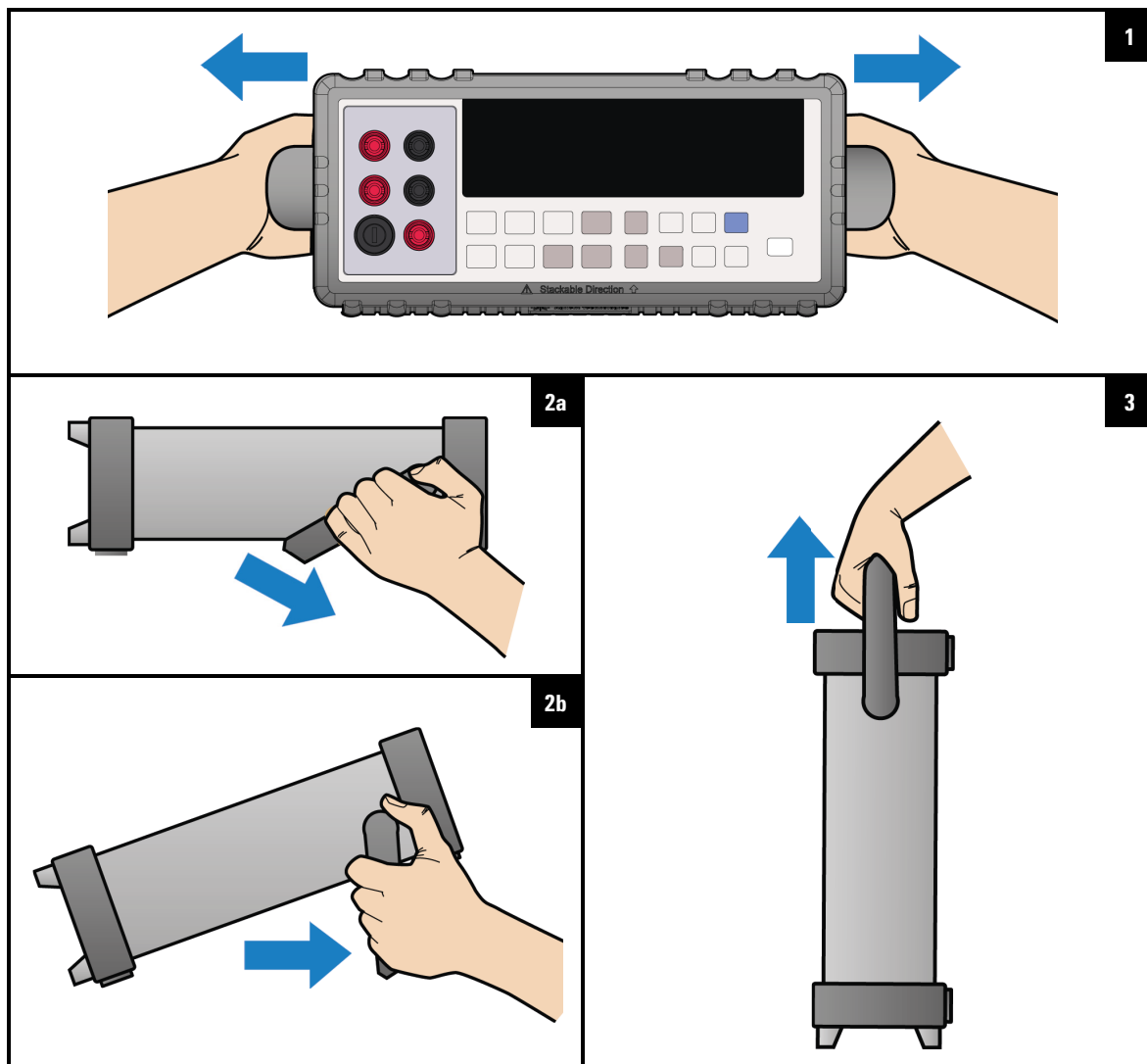
NOTE

For a complete list of all the annunciator descriptions, see *Chapter 1, "Getting Started"* in the *U3606B User's Guide*.

4 Power-On the U3606B

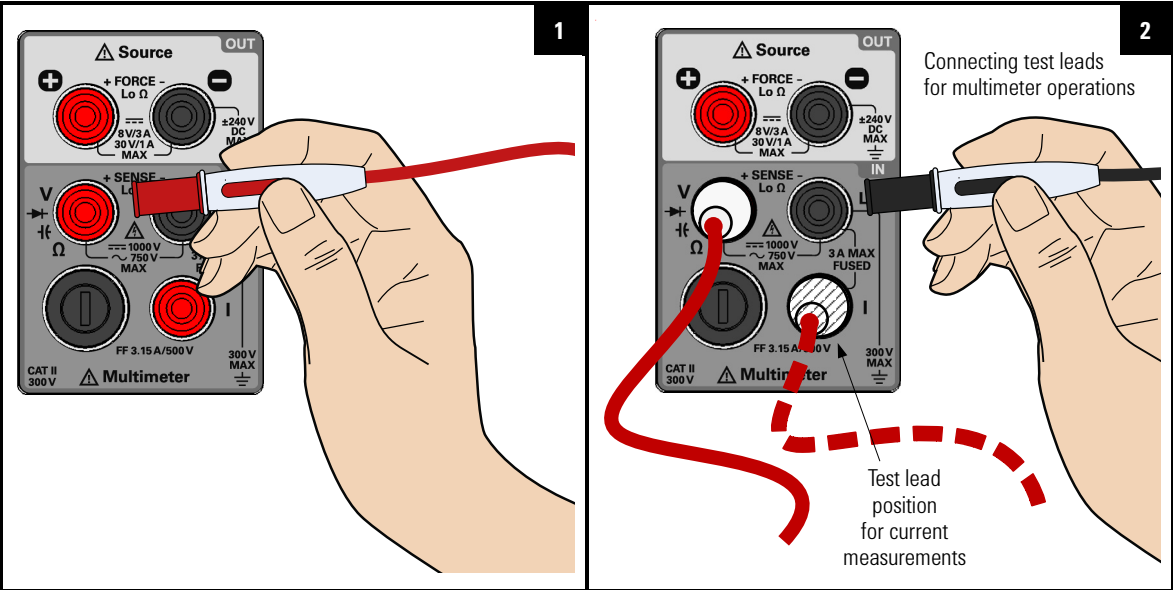


5 Adjust the Carrying Handle

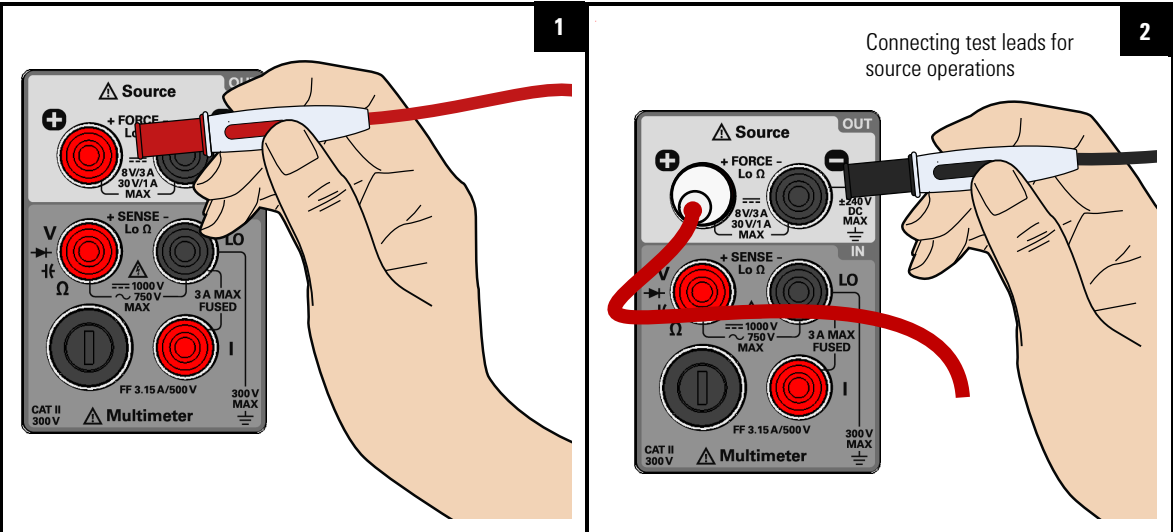


6 Connect the Test Leads to the Terminals

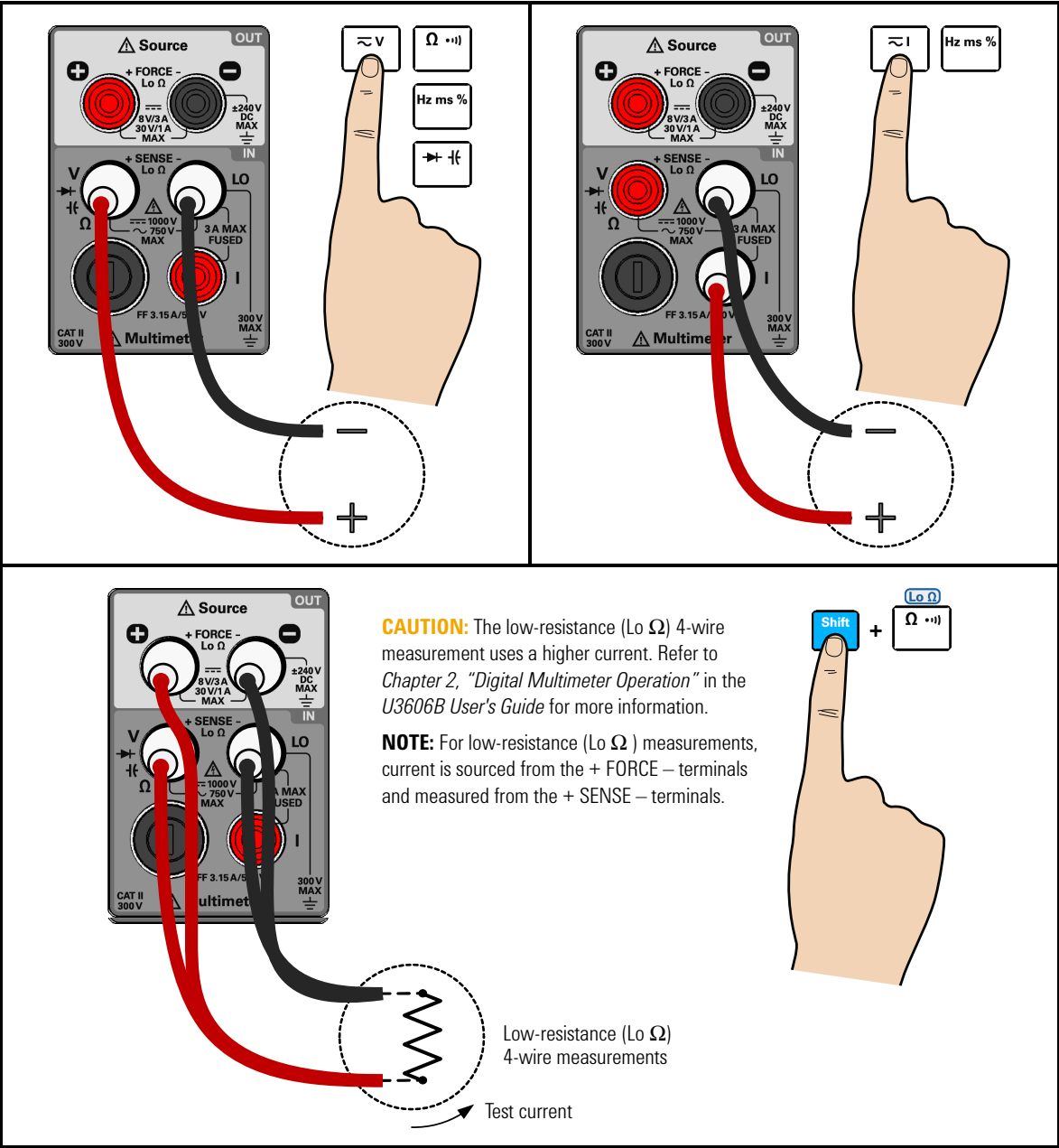
Multimeter operations



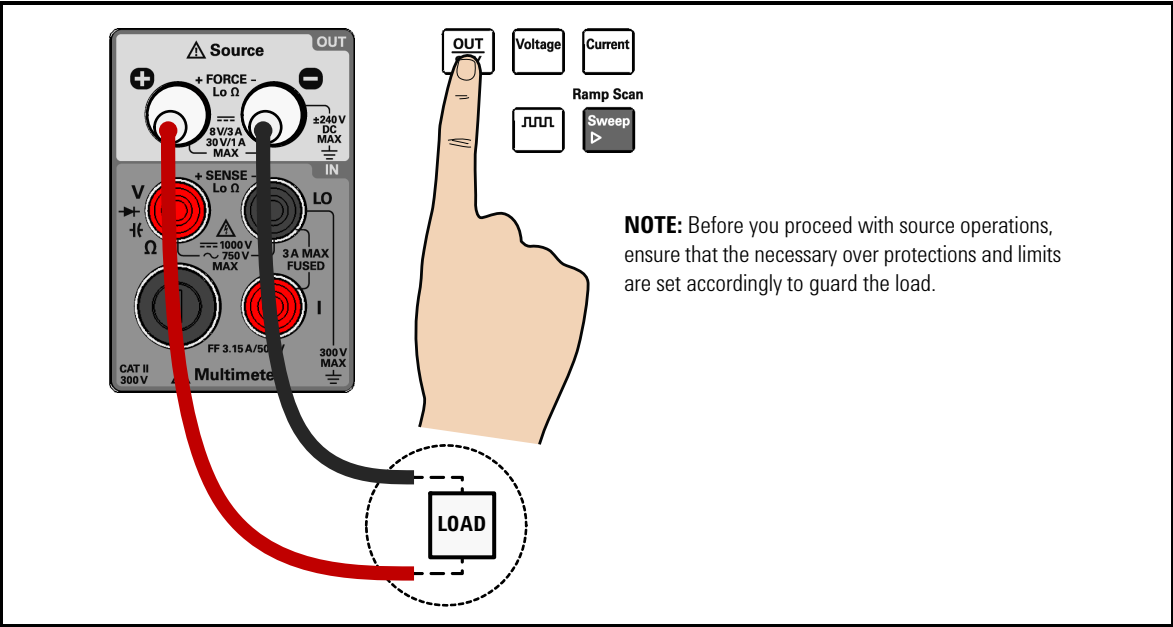
Source operations



Input connections for multimeter functions



Output connections for source functions



CAUTION

To avoid damaging this device, do not exceed the rated input limit.

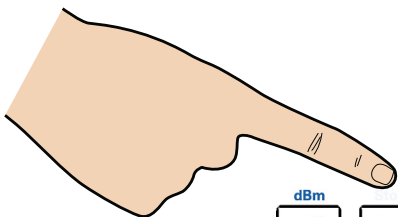
NOTE

For a detailed breakdown of all input/output terminal connections, see *Chapter 1, "Getting Started"* in the *U3606B User's Guide*.

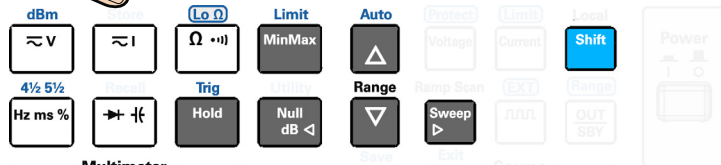
7 Select a Function

Selecting a measurement and math function

1



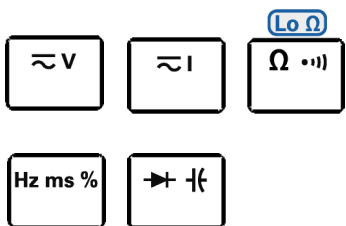
The following keys correspond to the U3606B multimeter functions.



Multimeter

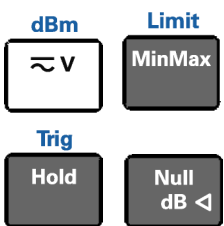
2

Press these keys to select a measurement function.

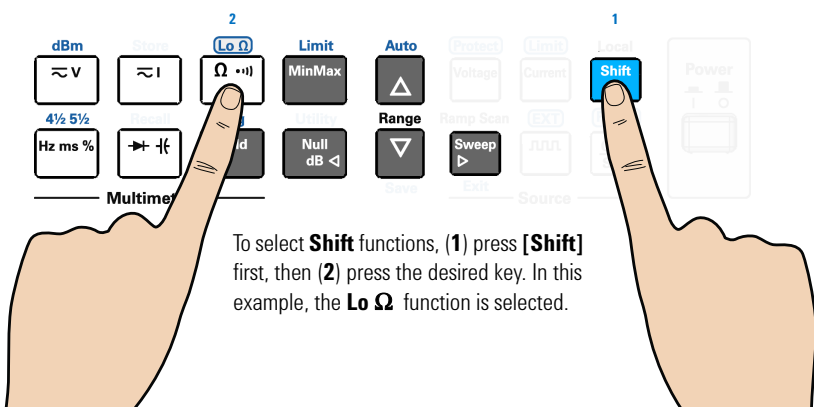


3

Press these keys to select a math function.



4



To select **Shift** functions, (1) press [**Shift**] first, then (2) press the desired key. In this example, the **Lo Ω** function is selected.

The following keys correspond to the U3606B source functions.

Press these keys to select a source function.

Press **[Shift]** > **[Protect]** to set the OV or OC protection value.
Press **[Shift]** > **[Limit]** to set the OV or OC limit value.

NOTE: You must first enable the output protection state from the Utility menu to activate the OC and OV protection features.

* OV = Over Voltage
OC = Over Current

Pressing **[OUT|SBY]** to enable or disable the U3606B output.

Entering the Utility menu

Press **[Shift]** > **[Utility]** to enter the Utility menu. The first menu item allows you to read error messages.

Shift

+

Utility
Null
dB ◀

Menu item

Error

Present setting

none

Use the arrow keys to navigate the Utility menu.

Auto
Range
Save

Utility
Null
dB ◀

Ramp Scan
Sweep
Exit

- Press **[◀]** or **[▶]** to step through the available menu items.
- Press **[▲]** or **[▼]** to switch between two values, to select a value from the list, or to decrease or increase a value.

Press **[Shift]** > **[Save]** to save a changed setting.

Shift

+

Save

Press **[Shift]** > **[Exit]** to exit the Utility menu.

Shift

+

Sweep
Exit

CV

00000

S1S2

V

Hz

1.2345

V

SBY

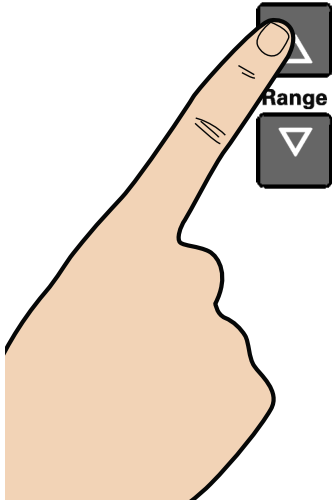
- - - - -

umA

The U3606B resumes normal operation. The saved settings are store in the U3606B's non-volatile memory.

Setting the range and resolution

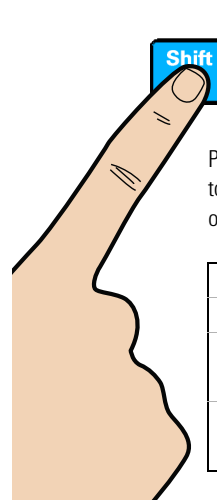
For multimeter functions:



Press Δ to select a higher range and disable autoranging.

Press ∇ to select a lower range and disable autoranging.

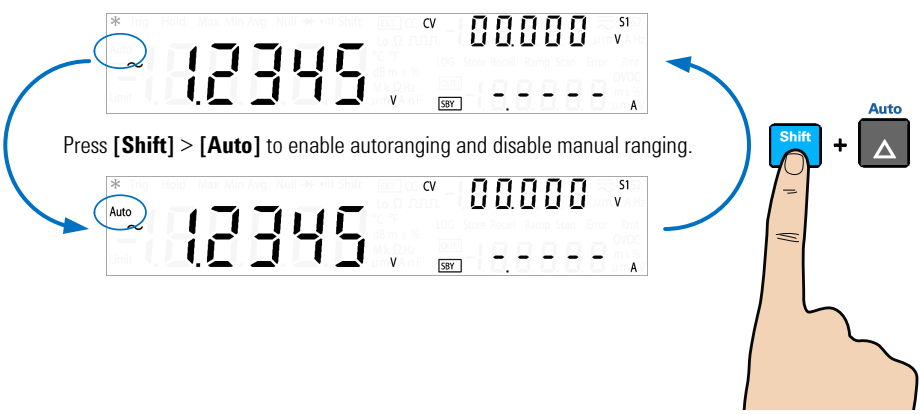
For source functions:



Press **[Shift]** + **Range** to toggle between the available output ranges:

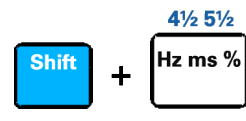
Range	CC	CV
S1S2	Autoranging	
S1	100 mA	30 V
	1 A	
S2	3 A	8 V
		1000 mV

Enable autoranging (for multimeter functions):



Press **[Shift]** + **[Auto]** to enable autoranging and disable manual ranging.

Setting the resolution:



Press **[Shift]** + **[4 1/2 5 1/2]** to toggle between 4 1/2 digit and 5 1/2 digit mode.

5 1/2 digit resolution has the best accuracy with noise rejection.

4 1/2 digit resolution provides faster reading rates.

8 Where to Go Next?

User references

User's Guide The Keysight *U3606B Multimeter|DC Power Supply User's Guide* contains more detailed information on the front panel, measurement functions, math operations, source operations, output functions, and the utility menu (the utility menu allows you to customize the instrument settings). It also contains information requisite to do performance tests, adjustments, troubleshooting, and repairs.

Programmer's Reference For information on remote programming and SCPI commands, see the Keysight *U3606B Multimeter|DC Power Supply Programmer's Reference*.

Keysight support and contact information

Check www.keysight.com/find/U3606B for the latest version of the User's Guide, additional information, downloads, and services related to your Keysight product.

The website provides information on the use of Keysight products and services. If you need to contact customer service, check the list of local Keysight contact centers on www.keysight.com/find/contactus.

For maintenance services, check your nearest Keysight Service Center on www.keysight.com/find/assist.

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Contact us

To obtain service, warranty, or technical assistance, contact us at the following phone or fax numbers:

United States:

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(tel) 31 20 547 2111

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(tel) (81) 426 56 7832 (fax) (81) 426 56 7840

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(tel) (080) 769 0800 (fax) (080) 769 0900

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